

### REMARKS

Claims 1 to 24 are pending in the case. Claim 25 has been added. The Examiner's reconsideration of the rejection is respectfully requested in view of the amendment and remarks.

Claims 1 to 24 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Fukunaga, U.S. Patent No. 6,346,940. The Examiner stated essentially that Fukunaga teaches or suggests all the limitations of claims 1 to 24.

Claim 1 claims, *inter alia*, "determining a graphics guide for positioning an instrument; and rendering the graphics guide such that an appearance of at least one portion of the graphics guide is modulated with respect to at least one of space and time." Claim 13 recites, *inter alia*, "a graphics guide generator for generating a graphics guide for positioning an instrument; and a rendering device for rendering the graphics guide such that an appearance of at least one portion of the graphics guide is modulated with respect to at least one of space and time."

Fukunaga teaches that an endoscope tip state computation unit is used to prepare for display an indicator image  $C_i$  (see Col. 7, lines 12 to 25). Fukunaga further teaches that a guiding marker preparation unit forms guiding markers (see col. 7, lines 65 to col. 8 line 3). Fukunaga does not teach, "a graphics guide for positioning an instrument" as claimed in claims 1 and 13. The indicator image  $C_i$  of Fukunaga shows "the state of a virtual endoscope tip" (see col. 7, lines 12-18). The indicator image  $C_i$  does not show a graphics guide for positioning an instrument but rather a state or real-time indication of where the instrument is. An indication of where an instrument is does not show where

the instrument should be, such as a “positioning” as claimed in claims 1 and 13.

Referring to the guiding marker preparation unit, Fukunaga teaches that the unit indicates a direction in which either a virtual endoscope or an actual endoscope should proceed (see col. 8, lines 1-3). Indicating a direction is distinct from a graphics guide for positioning an instruction. That is, an instrument can move in an indicated direction while being in any position, e.g., moving backwards in an indicated direction. Fukunaga does not teach that a guiding marker indicates a position that an instrument is to take, but rather a mere direction an instrument should proceed (see col. 8, lines 1-3). The graphics guide as claimed in claims 1 and 13 is for “positioning an instrument.” Fukunaga does not teach a guide for “positioning an instrument”, essentially as claimed in claims 1 and 13. Accordingly, Fukunaga fails to teach or suggest every limitation of claims 1 and 13.

Claims 2 to 12 depend from claim 1. Claims 14 to 24 depend from claim 13. The dependent claims are believed to be allowable for at least the reasons given for claims 1 and 13. At least claims 2 and 14 are believed to be allowable for additional reasons.

Claims 2 and 14 claim, *inter alia*, varying “a transparency of the at least one portion of the graphics guide with respect to other portions of the graphics guide to provide a substantially unobstructed view through the at least one portion of the graphics guide to at least a portion of the instrument.”

Fukunaga teaches that an endoscope image preparation unit can become transparent by thinning the pixels based on a preset degree of transparency. (See Col. 11, lines 44 to 48.) However, Fukunaga does not teach providing “a substantially unobstructed view through the at least one portion of the graphics guide to at least a portion of the instrument”, essentially as claimed in claims 2 and 14. Fukunaga teaches

that separate displays are used to show a current view as seen from an endoscope and a recorded path history of views as seen from an endoscope (see Figure 3). Further still, within the display for showing the recorded path, the indicator image  $C_i$  showing a state of the endoscope and the endoscope image  $A_i$  showing a three-dimensional model including guide markers are shown in different windows (see Figure 10). Fukunaga teaches that the guide markers are shown completely separate from the indicator image, thus there can be no “unobstructed view through the at least one portion of the graphics guide to at least a portion of the instrument”, essentially as claimed in claims 2 and 14. Therefore, Fukunaga does not teach providing “a substantially unobstructed view through the at least one portion of the graphics guide to at least a portion of the instrument”, essentially as claimed in claims 2 and 14. Therefore, Fukunaga fails to teach or suggest every limitation of claims 2 and 14.

New claim 25 recites, *inter alia*, “wherein said rendering comprises varying a transparency of the at least one portion of the graphics guide with respect to other portions of the graphics guide to provide a substantially unobstructed view through the at least one portion of the graphics guide to at least a portion of the instrument.” Claim 25 includes, substantially, the limitations of claims 1 and 2.

Fukunaga teaches that an endoscope image preparation unit can become transparent by thinning the pixels based on a preset degree of transparency. (See Col. 11, lines 44 to 48.) However, Fukunaga does not teach providing “a substantially unobstructed view through the at least one portion of the graphics guide to at least a portion of the instrument”, essentially as claimed in claim 25. Fukunaga teaches that separate displays are used to show a current view as seen from an endoscope and a

recorded path history of views as seen from an endoscope (see Figure 3). Further still, within the display for showing the recorded path, the indicator image Ci showing a state of the endoscope and the endoscope image Ai showing a three-dimensional model including guide markers are shown in different windows (see Figure 10). Fukunaga teaches that the guide markers are shown completely separate from the indicator image, thus there can be no "unobstructed view through the at least one portion of the graphics guide to at least a portion of the instrument", essentially as claimed in claims 2 and 14. Therefore, Fukunaga does not teach providing "a substantially unobstructed view through the at least one portion of the graphics guide to at least a portion of the instrument", essentially as claimed in claim 25. Therefore, Fukunaga fails to teach or suggest every limitation of claim 25.

For the forgoing reasons, the present application, including claims 1 to 25, is believed to be in condition for allowance. The Examiner's early and favorable action is respectfully urged.

Respectfully Submitted,



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